

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Robert D. Norman et al.  
Assignee: SanDisk Corporation and Western Digital Corporation  
Title: Device and Method for Controlling Solid-State Memory System  
Patent No.: 7,688,643 Issue Date: March 30, 2010  
Application No.: 10/809,061 Filing Date: March 24, 2004  
Docket No.: SNDK.015US7

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PETITION TO CORRECT THE ASSIGNEE UNDER 37 C.F.R. §1.183**

Sir:

On May 25, 2010, Applicants filed a Request for Certificate of Correction Under Rules 1.322 and 1.323 in the above-referenced patent to add the joint Assignee, Western Digital Corporation, to the issued patent. This joint Assignee was mistakenly omitted from the Issue Fee Transmittal.

Applicants received notice from the United States Patent and Trademark Office on June 3, 2010 (copy enclosed) that the Request was denied due to the fact that a Petition under 37 C.F.R. 3.81(b) and the petition fee set forth in 37 C.F.R. §1.117(h) were not included with the Request. Enclosed is a check for the petition fee of \$130.00. Also enclosed are copies of the Notice of Recordation of Assignment Documents that show the Assignees of the above-referenced patent are:

SunDisk Corporation 4401 Great America Parkway, Suite 150 Santa Clara, CA 95054	Recorded on September 25, 1991 Reel/Frame: 5847/0441, 3 pages
<b>Western Digital Corporation</b> 8105 Irvine Center Drive Irvine, CA 92718	Recorded on February 10, 1992 Reel/Frame: 6011/0377, 3 pages

Application No.: 10/809,061  
Attorney Docket No.: SNDK.015US7

Patent No.: 7,688,643

Name change from SunDisk Corporation to <b>SanDisk Corporation</b> 3270 Jay Street Santa Clara, CA 95054	Recorded on October 30, 1995 Reel/Frame: 7709/0577, 22 pages
-------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------

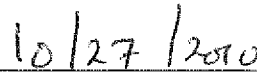
Further enclosed is a Request for Entry of Certificate of Correction. We also enclose a Certificate of Correction. Please enter the enclosed Certificate of Correction (PTO Form 1050), submitted in duplicate, in the above patent.

Applicants further hereby request that the file be forwarded to Certificates of Correction Branch for issuance of a Certificate of Correction. If this Petition does not result in the issuance of a Certificate of Correction, a telephone call to the undersigned agent to resolve further matters would be appreciated.

Respectfully submitted,



Michael G. Cleveland  
Reg. No. 46,030



Date

Davis Wright Tremaine LLP  
505 Montgomery Street, Suite 800  
San Francisco, CA 94111-6533  
(415) 276-6500 (main)  
(415) 276-6520 (direct)  
(415) 276-6599 (fax)  
Email: michaelcleveland@dwt.com

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Robert D. Norman et al.  
 Assignee: SanDisk Corporation and Western Digital Corporation  
 Title: Device and Method for Controlling Solid-State Memory System  
 Patent No.: 7,688,643 Issue Date: March 30, 2010  
 Application No.: 10/809,061 Filing Date: March 24, 2004  
 Docket No.: SNDK.015US7

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Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

**REQUEST FOR ENTRY OF CERTIFICATE OF CORRECTION**

Sir:

Please enter the enclosed Certificate of Correction (PTO Form 1050) in the above patent.

The errors sought to be corrected were made by applicants. See next section for explanation. The appropriate fee under 37 CFR §1.323 of \$100 has been previously paid.

The following errors were the result of Applicants' mistake:

[73] Assignee: Western Digital Corporation, Irvine, Calif should be added as a joint Assignee.

This mistake occurred in good faith under the following circumstances:

- ☒ due to clerical and/or typographical error; and/or  
☐ are of minor character because they do not materially affect the scope or meaning

of the patent (37 CFR §1.322; M.P.E.P. §1481).

☐ Other: {Enter Description}

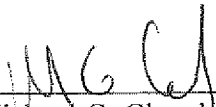
Application No.: 10/809,061  
 Attorney Docket No.: SNDK.015US0

Patent No.: 7,688,643

Enclosed is a Petition to Correct the Assignee Under 37 C.F.R. §1.183, Certificate of Correction and copies of the Notice of Recordation of Assignment Documents. The Commissioner is hereby authorized to charge any additional fees, which may be required, or credit any overpayment to Deposit Account No. 040258.

Please direct all inquiries concerning this request to the undersigned agent at (415) 276-6500.

Respectfully submitted,

  
\_\_\_\_\_  
Michael G. Cleveland  
Reg. No. 46,030

10/27/2010  
\_\_\_\_\_  
Date

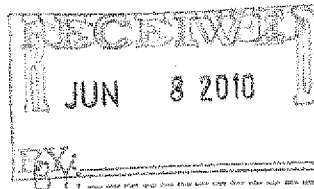
Davis Wright Tremaine LLP  
505 Montgomery Street, Suite 800  
San Francisco, CA 94111-6533  
(415) 276-6500 (main)  
(415) 276-6520 (direct)  
(415) 276-6599 (fax)  
Email: michaelcleveland@dwt.com



UNITED STATES PATENT  
AND TRADEMARK OFFICE

5NDK.015U57

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)



Date Mailed: June 3, 2010  
Patent No. : 7,688,643 B2  
Ser. No. : 10/809061  
Issued : October 10, 2006  
Inventor(s) : Karl M. J. Lofgren, et al.  
Title : DEVICE AND METHOD FOR CONTROLLING SOLID-STATE MEMORY  
SYSTEM

Request for Certificate of Correction

Consideration has been given your request for the issuance of a certificate of correction for the above-identified patent under the provisions of Rule(s) 1.322 and/or 1.323.

Assignees' names and addresses (assignment data, attorney agent/firm) printed in a patent, are based *solely* on information supplied in the appropriate space for identifying the assignment data, i.e., item 3 of the Issue Fee Transmittal Form PTOL-85B. Granting of a request under 37 CFR 3.81(b) is required to correct applicant's error providing incorrect or erroneous assignment data, *before* issuance of a Certificate of Correction, under 37 CFR 1.323 (*see Manual of Patent Examining Procedures (M.P.E.P.) Chp.1400, sect. 1481*). This procedure is required *at any time after the issue fee is paid*, including after issuance of the patent.

In view of the foregoing, your request is hereby denied.

A request to correct the Assignee under 37 CFR 3.81(b) should include:

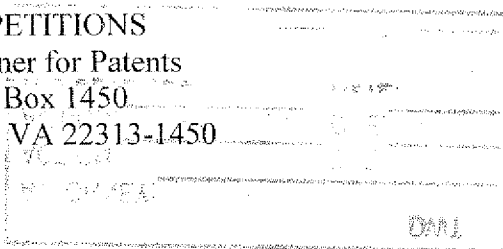
- A. **the processing fee set forth in 37 CFR 1.17(h) (currently \$130);**
- B. a statement that the failure to include the correct assignee name on the PTOL-85B was inadvertent; and
- C. a copy of the Notice of Recordation of Assignment Document, reflecting the reel and frame number where the assignment(s) is recorded and/or reflecting proof of *the date* the assignment was submitted for recordation.

*In the Request*, Applicant(s) may request that the file be forwarded to Certificates of Correction Branch, for issuance of a Certificate of Correction, if the Request is granted.

Any request under 37 CFR 3.81(b) should be directed to the following address or facsimile number:

By mail:

Mail Stop PETITIONS  
Commissioner for Patents  
Post Office Box 1450  
Alexandria, VA 22313-1450



By hand: Customer Service Window  
Mail Stop Petitions  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

By fax: (571) 273-0025  
ATTN: Office of Petitions

If a fee (currently \$100) was previously submitted for consideration of a Request for Certificate of Correction, under CFR 1.323, to correct assignment data, no additional fee is required.

**Magdalene Talley**  
For Mary F. Diggs, Supervisor  
Decisions & Certificates  
of Correction Branch  
(571) 272-0423

Davis, Wright, Tremaine LLP  
505 Montgomery Street, Ste. 800  
San Francisco, CA 94111-6533

**MD/mt**

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO. : 7,688,643

APPLICATION NO.: 10/809,061

ISSUE DATE : March 30, 2010

INVENTOR(S) : Lofgren et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Paragraph (73) entitled "Assignee," please revise to read as follows:

SanDisk Corporation, Milpitas, California (US)

Western Digital Corporation, Lake Forest, California (US)

MAILING ADDRESS OF SENDER (Please do not use customer number below):

DAVIS WRIGHT TREMAINE LLP  
505 Montgomery Street, Suite 800  
San Francisco, California 94111-6533

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

DATE: 10/11/91

TO:

PHILIP YAU

MAJESTIC, PARSONS, SIEBERT & HSUE

FOUR EMBARCADERO CENTER

SUITE 1450

SAN FRANCISCO, CA 94111-4121

**UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT**

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE U.S. PATENT AND TRADEMARK OFFICE ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT ASSIGNMENT PROCESSING SYSTEM. IF YOU SHOULD FIND ANY ERRORS, ON THIS NOTICE, PLEASE SEND A REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT BRANCH, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231

ASSIGNOR:

NORMAN, ROBERT D.

DOC DATE: 09/20/91

ASSIGNOR:

MEHROTRA, SANJAY

DOC DATE: 09/20/91

RECORDATION DATE: 09/25/91    NUMBER OF PAGES 003    REEL/FRAME 5847/0441

DIGEST :ASSIGNMENT OF ASSIGNORS INTEREST

ASSIGNEE:

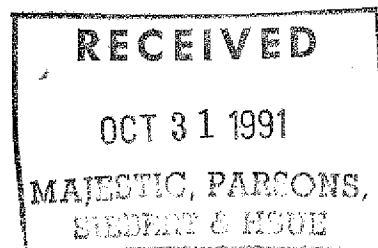
SUNDISK CORPORATION, A CORP. OF DE  
SANTA CLARA, CA

SERIAL NUMBER    7-736733

FILING DATE    07/26/91

PATENT PATENT

ISSUE DATE    00/00/00







D

LAW OFFICES OF  
**MAJESTIC, PARSONS, SIEBERT & HSUE**

A PROFESSIONAL CORPORATION  
FOUR EMBARCADERO CENTER, SUITE 1450  
SAN FRANCISCO, CALIFORNIA 94111-4121  
TELEPHONE (415) 362-5556  
TELEX 278638 MGPS  
TELECOPY (415) 362-5418

PALO ALTO OFFICE:  
250 CAMBRIDGE AVE., SUITE 201  
PALO ALTO, CA 94306  
TELEPHONE (415) 322-6235

Box Assignments  
Hon. Commissioner of  
Patents and Trademarks  
Washington, D.C. 20231

RECEIVED  
SEP 27 AM 9:25  
ASSIGNMENT BRANCH

REQUEST FOR RECORDAL OF PATENT DOCUMENT

Sir:

Please record the attached Assignment from Robert D. Norman and Sanjay Mehrotra (parties conveying the interest), to SunDisk Corporation (party receiving the interest), a corporation of the state of Delaware, having a principal place of business at 4401 Great America Parkway, Suite 150, Santa Clara, California 95054 in connection with the following:

<u>Patent Appln. No.</u>	<u>Filing Date</u>	<u>Inventor(s)</u>
07/736,733	July 26, 1991	Robert D. Norman et al.

A total of one application is involved in this request. The assignment recordation fee of \$8.00 was previously submitted on September 11, 1991. However, if the Patent Office has not received this fee, please deduct the \$8.00 from the undersigned's Deposit Account No. 13-1030. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Deposit Account No. 13-1030. A duplicate copy of this transmittal sheet is enclosed.

Please send all correspondence regarding this matter to:

Philip Yau, Esq.  
MAJESTIC, PARSONS, SIEBERT & HSUE  
4 Embarcadero Center, Suite 1450  
San Francisco, California 94111-4121  
Telephone: (415) 362-5556  
Telefacsimile: (415) 362-5418

91592639

The attached document was executed on September 18, 1991.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on September 20, 1991.

Respectfully submitted,

MAJESTIC, PARSONS, SIEBERT & HSUE

Philip Yau, Reg. No. 32,892

Atty. Docket: HARI-1500  
DS20215 09/26/91 07736733

13-1030 020 518 9.00CH

REC 5847 RAMEL 41



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

MARCH 19, 1996

PTAS

MAJESTIC, PARSONS, SIEBERT & HSUE  
GERALD P. PARSONS  
4 EMBARCADERO CENTER, STE. 1450  
SAN FRANCISCO, CA 94111-4121



\*100099030A\*

**UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT**

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231.

RECORDATION DATE: 10/30/1995

REEL/FRAME: 7709/0577  
NUMBER OF PAGES: 22

BRIEF: CHANGE OF NAME (SEE DOCUMENT FOR DETAILS).

**ASSIGNOR:**

SUNDISK CORPORATION

DOC DATE: 08/25/1995

**ASSIGNEE:**

SANDISK CORPORATION  
3270 JAY STREET  
SANTA CLARA, CALIFORNIA 95054

SERIAL NUMBER: 07323779  
PATENT NUMBER: 5070032

FILING DATE: 03/15/1989  
ISSUE DATE: 12/03/1991

SERIAL NUMBER: 07734221  
PATENT NUMBER: 5163021

FILING DATE: 07/22/1991  
ISSUE DATE: 11/10/1992

SERIAL NUMBER: 07508273  
PATENT NUMBER: 5172338

FILING DATE: 04/11/1990  
ISSUE DATE: 12/15/1992

SERIAL NUMBER: 07422949  
PATENT NUMBER: 5200959

FILING DATE: 10/17/1989  
ISSUE DATE: 04/06/1993

A S S I G N M E N T

(Attorney Docket No. HARI-1500)

WHEREAS, ROBERT D. NORMAN, a resident of San Jose, California, and SANJAY MEHROTRA, a resident of Milpitas, California, hereinafter referred to as "Assignors", have invented certain new and useful improvements as described and set forth in an application for Letters Patent of the United States entitled DEVICE AND METHOD FOR CONTROLLING SOLID-STATE MEMORY SYSTEM filed with the U.S. Patent Office on July 26, 1991 under Serial No. 736,733;

WHEREAS, SUNDISK CORPORATION, a Corporation of the State of Delaware, having a place of business at Santa Clara, California, hereinafter referred to as "Assignee", desires to acquire the entire right, title and interest in and to said application, said invention, said improvements and all Letters Patent which may be granted thereon in the United States or any foreign country;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged by Assignors,

1. Assignors hereby sell, assign, transfer and convey to Assignee the entire worldwide right, title and interest in and to said application, said invention and said improvements, and in and to any and all Letters Patent on said invention and improvements that may be granted by the United States or any foreign country, including any divisions, substitutions, continuations in whole or in part, conversions, reissues, additions or extensions thereof, said interest to be held and enjoyed by Assignee as fully and exclusively as it would have been held and enjoyed by said Assignors had this Assignment and transfer not been made.

2. Assignors hereby warrant, covenant and represent that they have not heretofore granted any license, right or privilege with respect to said application, invention or improvements, or in any other way encumbered the same, and that they have the full right to make this Assignment.

FILED 584 / MAR 4 42

3. Assignors further agree that at the request and expense of Assignee, but without charge to said Assignee, they will promptly execute all papers necessary or desirable to perfect ownership of said invention, improvements, applications or said Letters Patent, in said Assignee, and will execute all oaths and other papers, within the truth, that are necessary or desirable for prosecuting said application, for use in interference proceedings involving said invention or improvements, for refiling said applications, for filing of said divisional, substitution, continuation or continuation-in-part applications covering said invention or improvements which are deemed necessary or desirable by Assignee, for reissuance or reexamination of said Letters Patent, or for the filing in foreign countries of applications for Letters Patent covering said invention or improvements.

4. The terms, covenants and provisions of this Assignment shall inure to the benefit of Assignee, its successors, assigns and other legal representatives, and shall be binding upon Assignors, their heirs, legal representatives and assigns.

IN TESTIMONY WHEREOF, we have executed and delivered to Assignee this instrument this 20th day of September, 1991.

Robert D. Norman  
Robert D. Norman

Sanjay Mehrotra  
Sanjay Mehrotra

RECORDED  
PATENT AND TRADEMARK  
OFFICE

SEP 25 1991

STATE OF CALIFORNIA )

COUNTY OF )

On this 18th day of September, 1991, before me, the undersigned notary public, personally appeared the above-named Assignors, known to me or proved to me on the basis of satisfactory evidence to be the persons whose names are subscribed to this Assignment, and acknowledged to me that they executed the same.

(SEAL)

Serial No. 736,733

Barbara A. Crumbacher  
Notary Public  
OFFICIAL SEAL  
BARBARA A. CRUMBACHER  
NOTARY PUBLIC - CALIFORNIA  
2 COUNTY OF SANTA CLARA  
Comm. Exp. Jan. 7, 1994

REC-584 / 1144443



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

DATE: 04/02/92

TO:

PHILIP YAU

MAJESTIC, PARSONS, SIEBERT & HSUE

4 EMBARCADERO CENTER, STE. 1450

SAN FRANCISCO, CA 94111-4121

RECEIVED  
APR 9 1992  
PATENT AND TRADEMARK OFFICE

COPY

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE U.S. PATENT AND TRADEMARK OFFICE ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT ASSIGNMENT PROCESSING SYSTEM. IF YOU SHOULD FIND ANY ERRORS, ON THIS NOTICE, PLEASE SEND A REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT BRANCH, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231

ASSIGNOR:  
LOFGREN, KARL M. J.

DOC DATE: 12/09/91

ASSIGNOR:  
STAI, JEFFREY D.

DOC DATE: 12/09/91

ASSIGNOR:  
GUPTA, ANIL

DOC DATE: 12/09/91

RECORDATION DATE: 02/10/92      NUMBER OF PAGES 003      REEL/FRAME 6011/0377

DIGEST :ASSIGNMENT OF ASSIGNORS INTEREST

ASSIGNEE:  
WESTERN DIGITAL CORPORATION, A DE CORP.  
IRVINE, CALIFORNIA

SERIAL NUMBER      7-736733      FILING DATE      07/26/91  
PATENT NUMBER           ISSUE DATE      00/00/00



Box Assignments  
Hon. Commissioner of  
Patents and Trademarks  
Washington, D.C. 20231

REQUEST FOR RECORDAL OF PATENT DOCUMENT

Sir:

Please record the attached ASSIGNMENT from KARL M.J. LOFGREN, JEFFREY D. STAI and ANIL GUPTA (parties conveying the interest), to WESTERN DIGITAL CORPORATION (party receiving the interest), a corporation of the State of Delaware, having a principal place of business at 8105 Irvine Center Drive, Irvine, California 92718, in connection with the following:

<u>Patent Appln. No.</u>	<u>Filing Date</u>	<u>Inventors</u>
736,733	July 26, 1991	Karl M.J. Lofgren Jeffrey D. Stai Anil Gupta Robert D. Norman Sanjay Mehrotra

A total of one application is involved in this request, and the fee of \$40.00 is enclosed to cover the costs of recordal. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Deposit Account No. 13-1030. A duplicate copy of this transmittal sheet is enclosed.

Please send all correspondence regarding this matter to:

Philip Yau  
MAJESTIC, PARSONS, SIEBERT & HSUE  
4 Embarcadero Center, Suite 1450  
San Francisco, California 94111-4121  
Telephone: (415) 362-5556  
Telefacsimile: (415) 362-5418

The attached document was executed on December 9, 1991.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.  
Executed on February 4, 1992.

Respectfully submitted, 31611936

MAJESTIC, PARSONS, SIEBERT & HSUE

  
Philip Yau, Reg. No. 32,892

Atty. Docket: HARI-1500

060 MC 02/19/92 0736733

2 581

40.00 CK

Serial No.: 736,733

- 1 -

A S S I G N M E N T

(Attorney Docket No. HARI-1500)

WHEREAS, KARL M.J. LOFGREN, a resident of Newport Beach, California, JEFFREY D. STAI, a resident of Placentia, California, and ANIL GUPTA, a resident of Irvine, California hereinafter referred to as "Assignors", have invented certain new and useful improvements as described and set forth in an application for Letters Patent of the United States entitled DEVICE AND METHOD FOR CONTROLLING SOLID-STATE MEMORY SYSTEM filed with the U.S. Patent Office on July 26, 1991 under Serial No. 736,733;

WHEREAS, WESTERN DIGITAL CORPORATION, a Delaware corporation, having a place of business at Irvine, California, hereinafter referred to as "Assignee", desires to acquire the entire right, title and interest in and to said application, said invention, said improvements and all Letters Patent which may be granted thereon in the United States or any foreign country;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged by Assignors,

1. Assignors hereby sell, assign, transfer and convey to Assignee the entire worldwide right, title and interest in and to said application, said invention and said improvements, and in and to any and all Letters Patent on said invention and improvements that may be granted by the United States or any foreign country, including any divisions, substitutions, continuations in whole or in part, conversions, reissues, additions or extensions thereof, said interest to be held and enjoyed by Assignee as fully and exclusively as it would have been held and enjoyed by said Assignors had this Assignment and transfer not been made.

2. Assignors hereby warrant, covenant and represent that they have not heretofore granted any license, right or privilege with respect to said application, invention or improvements, or in any other way encumbered the same, and that they have the full right to make this Assignment.

REC-6011 PAGE 378

REC-6011 FRANK 379

3. Assignors further agree that at the request and expense of Assignee, but without charge to said Assignee, they will promptly execute all papers necessary or desirable to perfect ownership of said invention, improvements, applications or said Letters Patent, in said Assignee, and will execute all oaths and other papers, within the truth, that are necessary or desirable for prosecuting said application, for use in interference proceedings involving said invention or improvements, for refiling said applications, for filing of said divisional, substitution, continuation or continuation-in-part applications covering said invention or improvements which are deemed necessary or desirable by Assignee, for reissuance or reexamination of said Letters Patent, or for the filing in foreign countries of applications for Letters Patent covering said invention or improvements.

4. The terms, covenants and provisions of this Assignment shall inure to the benefit of Assignee, its successors, assigns and other legal representatives, and shall be binding upon Assignors, their heirs, legal representatives and assigns.

IN TESTIMONY WHEREOF, we have executed and delivered to Assignee this instrument this 9TH day of December, 1991.

Karl M. J. Lofgren  
Karl M. J. Lofgren

Jeffrey D. Stai  
Jeffrey D. Stai

Anil Gupta 12/9/91  
Anil Gupta

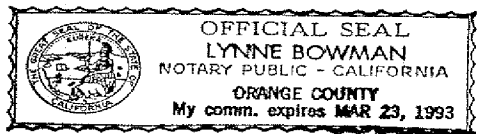
RECORDED  
PATENT AND TRADEMARK  
OFFICE

FEB 10 1992

STATE OF CALIFORNIA )  
COUNTY OF ORANGE )

On this 9TH day of DECEMBER, 1991, before me, the undersigned notary public, personally appeared the above-named Assignors, known to me or proved to me on the basis of satisfactory evidence to be the persons whose names are subscribed to this Assignment, and acknowledged to me that they executed the same.

(SEAL)



Lynne Bowman  
Notary Public



SERIAL NUMBER: 07670246  
PATENT NUMBER: 5270979

FILING DATE: 03/15/1991  
ISSUE DATE: 12/14/1993

SERIAL NUMBER: 07963838  
PATENT NUMBER: 5297148

FILING DATE: 10/20/1992  
ISSUE DATE: 03/22/1994

SERIAL NUMBER: 07919715  
PATENT NUMBER: 5315541

FILING DATE: 07/24/1992  
ISSUE DATE: 05/24/1994

SERIAL NUMBER: 07629250  
PATENT NUMBER: 5343063

FILING DATE: 12/18/1990  
ISSUE DATE: 08/30/1994

SERIAL NUMBER: 08149602  
PATENT NUMBER: 5369615

FILING DATE: 11/08/1993  
ISSUE DATE: 11/29/1994

SERIAL NUMBER: 08117219  
PATENT NUMBER: 5380672

FILING DATE: 09/03/1993  
ISSUE DATE: 01/10/1995

SERIAL NUMBER: 08148932  
PATENT NUMBER: 5396468

FILING DATE: 11/08/1993  
ISSUE DATE: 03/07/1995

SERIAL NUMBER: 07963851  
PATENT NUMBER: 5418752

FILING DATE: 10/20/1992  
ISSUE DATE: 05/23/1995

SERIAL NUMBER: 08089175  
PATENT NUMBER: 5422842

FILING DATE: 07/08/1993  
ISSUE DATE: 06/06/1995

SERIAL NUMBER: 07948175  
PATENT NUMBER: 5428621

FILING DATE: 09/21/1992  
ISSUE DATE: 06/27/1995

SERIAL NUMBER: 07736733  
PATENT NUMBER: 5430859

FILING DATE: 07/26/1991  
ISSUE DATE: 07/04/1995

SERIAL NUMBER: 08157573  
PATENT NUMBER: 5436587

FILING DATE: 11/24/1993  
ISSUE DATE: 07/25/1995

SERIAL NUMBER: 08252052  
PATENT NUMBER: 5438573

FILING DATE: 06/01/1994  
ISSUE DATE: 08/01/1995

PEARLENE FOSTER, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

Box Assignments  
Hon. Commissioner of  
Patents and Trademarks  
Washington, D.C. 20231

680-5810  
10/30/95

12-01-1995



RECORDATION FEE  
(Fee)



100099030

Please record the attached original documents or copy thereof:

1. The name of the conveying party is SunDisk Corporation.
2. The name of the party receiving the interest is SanDisk Corporation, a corporation of the State of Delaware, having a principal place of business at 3270 Jay Street, Santa Clara, California 95054.
3. The nature of the attached document is **CHANGE OF NAME**, which was executed on August 25, 1995.
4. In connection with:  
  
The patents listed on the attached Schedule A.
5. The name and address to whom all correspondence regarding this matter should be mailed is:  
  
Gerald P. Parsons  
MAJESTIC, PARSONS, SIEBERT & HSUE  
4 Embarcadero Center, Suite 1450  
San Francisco, California 94111-4121  
Telephone: (415) 362-5556  
Telefacsimile: (415) 362-5418
6. A total of 17 patents are involved in this request.
7. The fee of \$40.00 each, or a total of \$680.00 is enclosed to cover the costs of recordal.
8. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Deposit Account No. 13-1030. A duplicate copy of this transmittal sheet is enclosed.
9. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Respectfully submitted,

MAJESTIC, PARSONS, SIEBERT & HSUE

Dated: October 25, 1995

Atty. Docket: HARI-0

050 MH 11/21/95 5070032

Gerald P. Parsons  
Gerald P. Parsons

1 581

680.00 OK

The total number of pages including cover sheet, attachments, and document is twenty-two (22).

**SCHEDULE A  
ISSUED PATENTS**

PATENT#	ISSUED	INVENTORS
5,070,032	12/03/91	Jack H. Yuan Eliyahou Harari
5,163,021	11/10/92	Sanjay Mehrotra Eliyahou Harari Winston Lee
5,172,338	12/15/92	Sanjay Mehrotra Eliyahou Harari Winston Lee
5,200,959	04/06/93	Stephen Gross Robert D. Norman
5,270,979	12/14/93	Eliyahou Harari Daniel C. Guterman Sanjay Mehrotra Stephen J. Gross
5,297,148	03/22/94	Eliyahou Harari Robert D. Norman Sanjay Mehrotra
5,315,541	05/24/94	Eliyahou Harari Sanjay Mehrotra
5,343,063	08/30/94	Jack H. Yuan Gheorghe Samachisa Daniel C. Guterman Eliyahou Harari
5,369,615	11/29/94	Eliyahou Harari Daniel C. Guterman Sanjay Mehrotra Stephen J. Gross
5,380,672	01/10/95	Jack H. Yuan Gheorghe Samachisa Daniel C. Guterman Eliyahou Harari

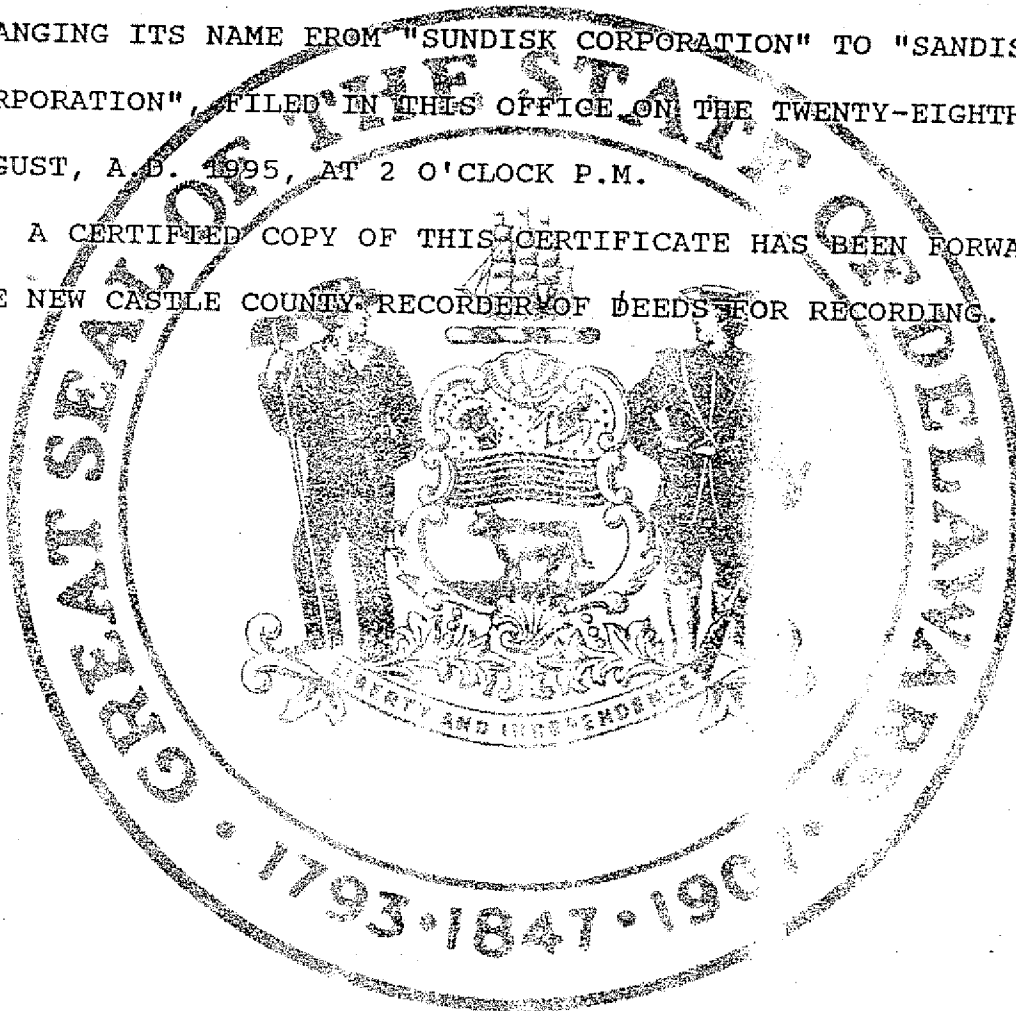
Cont'd.....

PATENT#	ISSUE	NAME
5,396,468	03/07/95	Eliyahou Harari Daniel C. Guterman Sanjay Mehrotra Stephen J. Gross John S. Mangan
5,418,752	05/23/95	Eliyahou Harari Robert D. Norman Sanjay Mehrotra
5,422,842	06/06/95	Raul-Adrian Cernea Sanjay Mehrotra Douglas J. Lee
5,428,621	06/27/95	Sanjay Mehrotra Winston Lee George Samachisa Stephen J. Gross
5,430,859	07/04/95	Robert D. Norman Karl M.J. Lofgren Jeffrey D. Stai Anil Gupta Sanjay Mehrotra
5,436,587	07/25/95	Raul-Adrian Cernea
5,438,573	08/01/95	John S. Mangan Robert D. Norman Jeffrey Craig Richard Albert Anil Gupta Jeffrey D. Stai Karl M.J. Lofgren

# Office of the Secretary of State

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "SUNDISK CORPORATION", CHANGING ITS NAME FROM "SUNDISK CORPORATION" TO "SANDISK CORPORATION", FILED IN THIS OFFICE ON THE TWENTY-EIGHTH DAY OF AUGUST, A.D. 1995, AT 2 O'CLOCK P.M.

A CERTIFIED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS FOR RECORDING.



*Edward J. Freel*  
\_\_\_\_\_  
Edward J. Freel, Secretary of State

2162478 8100

950195213

AUTHENTICATION:

7622444

DATE:

08-28-95

RESTATED CERTIFICATE OF INCORPORATION  
OF SUNDISK CORPORATION  
a Delaware Corporation  
(originally incorporated on June 1, 1988)

The undersigned, Eliyahou Harari and Cindy Burgdorf hereby certify that:

ONE: They are the duly elected and acting President and Secretary, respectively, of said corporation.

TWO: The Certificate of Incorporation of said corporation shall be amended and restated to read in full as follows:

ARTICLE I.

The name of this corporation is SanDisk Corporation.

ARTICLE II.

The address of the registered office of the corporation in the State of Delaware is 1209 Orange Street, in the City of Wilmington, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE III.

The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

ARTICLE IV.

A. Classes of Stock. This corporation is authorized to issue two classes of stock to be designated, respectively, "Common Stock" and "Preferred Stock." The total number of shares which the corporation is authorized to issue is Fifty-Nine Million Three Hundred Twenty-Eight Thousand One Hundred Sixty-Two (59,328,162) shares. Forty Million (40,000,000) shares shall be Common Stock and Nineteen Million Three Hundred Twenty-Eight Thousand One Hundred Sixty-Two (19,328,162) shares shall be Preferred Stock.

Immediately upon the filing of this Amended and Restated Certificate of Incorporation, each three (3) outstanding shares of the Corporation's Common Stock, \$0.001 par value per share, will be exchanged and combined, automatically, without further action, into two (2) shares of Common Stock and each three (3) outstanding

shares of the Corporation's Preferred Stock, \$0.001 par value per share, will be exchanged and combined, automatically, without further action, into two (2) shares of Preferred Stock.

B. Rights, Preferences and Restrictions of Preferred Stock. The Preferred Stock authorized by this Amended and Restated Certificate of Incorporation may be issued from time to time in one or more series. The rights, preferences, restrictions and other matters relating to the Series A Preferred Stock, which series shall consist of 510,000 shares, the Series B Preferred Stock, which series shall consist of 2,935,280 shares, the Series C Preferred Stock, which series shall consist of 266,605 shares, the Series D Preferred Stock, which series shall consist of 1,617,740 shares, the Series E Preferred Stock, which series shall consist of 4,597,592 shares, the Series F Preferred Stock, which series shall consist of 4,776,775 shares and the Series G Preferred Stock, which series shall consist of 664,620 shares, are as set forth below in this Article IV.

The remaining shares of Preferred Stock may be issued from time to time in one or more series. The Board of Directors of the Corporation (the "Board of Directors") is expressly authorized to provide for the issue of all or any of the remaining shares of the Preferred Stock in one or more series, and to fix the number of shares and to determine or alter, for each such series, such voting powers, full or limited, or no voting powers, and such designations, preferences, and relative, participating, optional, or other rights and such qualifications, limitations, or restrictions thereof, as shall be stated and expressed in the resolution or resolutions adopted by the Board of Directors providing for the issue of such shares (a "Preferred Stock Designation") and as may be permitted by the General Corporation Law of the State of Delaware. The Board of Directors is also expressly authorized to increase or decrease (but not below the number of shares of such series then outstanding) the number of shares of any series subsequent to the issue of shares of that series. In case the number of shares of any such series shall be so decreased, the shares constituting such decrease shall resume the status that they had prior to the adoption of the resolution originally fixing the number of shares of such series.

1. Dividend Provisions.

a. Subject to the rights of series of Preferred Stock which may from time to time come into existence, the holders of shares of Series E, Series F and Series G Preferred Stock shall be entitled to receive dividends, out of any assets legally available therefor, prior and in preference to any declaration or payment of any dividend (payable other than in Common Stock or other securities and rights convertible into or entitling the holder thereof to receive, directly or indirectly, additional shares of Common Stock of this corporation) on the Series A, Series B, Series C or Series D Preferred Stock or the Common Stock of this corporation, at the rate of \$0.225 per share per annum of Series E Preferred Stock and \$0.4282 per share per annum of Series F Preferred Stock at the beginning of each calendar quarter beginning April 1, 1992, and at

b. Subject to the prior rights of holders of Series E, Series F and Series G Preferred Stock at the time outstanding as provided in subsection 1(a), the holders of shares of Series A, Series B, Series C and Series D Preferred Stock shall be entitled to receive dividends, out of any assets legally available therefor, prior and in preference to any declaration or payment of any dividend (payable other than in Common Stock or other securities and rights convertible into or entitling the holder thereof to receive, directly or indirectly, additional shares of Common Stock of this corporation) on the Common Stock of this corporation, at the rate of \$0.0495 per annum per share of Series A Preferred Stock, \$0.1995 per annum per share of Series B and Series C Preferred Stock and \$0.30 per annum per share of Series D Preferred Stock, payable quarterly when, as and if declared by the Board of Directors; provided, however, that dividends may only be paid jointly on the Series A, Series B, Series C and Series D Preferred Stock and may not be paid to one such series of Preferred Stock without making the appropriate payment to the other such series of Preferred Stock simultaneously. Such dividends shall not be cumulative.

a. In the event of any liquidation, dissolution or winding up of this corporation, either voluntary or involuntary, the holders of the Series E, Series F and Series G Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets of this corporation to the holders of the Series A, Series B, Series C or Series D Preferred Stock and the Common Stock by reason of their ownership thereof, an amount per share equal to the sum of (1) \$3.30 for each outstanding share of Series E Preferred Stock (the "Original Series E Issue Price"), \$6.2805 for each outstanding share of Series F Preferred Stock (the "Original Series F Issue Price"), \$9.4208 for each outstanding share of Series G Preferred Stock (the "Original Series G Issue Price"), plus (2) an amount equal to accrued but unpaid dividends on such share. If upon the occurrence of such event, the assets and funds thus distributed



among the holders of the Series E, Series F and Series G Preferred Stock shall be insufficient to permit the payment to such holders of the full aforesaid preferential amount, then the entire assets and funds of the corporation legally available for distribution shall be distributed ratably among the holders of the Series E, Series F and Series G Preferred Stock and, as between such series, in proportion to the product of the respective preference amount of each such share multiplied by the number of shares of such stock owned by each such holder.

b. Upon the completion of the distribution to the holders of the Series E, Series F and Series G Preferred Stock required by subparagraph (a) of this Section 2, if assets remain in this corporation, the holders of the Series A, Series B, Series C and Series D Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets of this corporation to the holders of the Common Stock by reason of their ownership thereof, an amount per share equal to the sum of (1) \$0.4995 for each outstanding share of Series A Preferred Stock (the "Original Series A Issue Price"), \$1.9995 for each outstanding share of Series B Preferred Stock (the "Original Series B Issue Price"), \$1.9995 for each outstanding share of Series C Preferred Stock (the "Original Series C Issue Price"), \$3.00 for each outstanding share of Series D Preferred Stock (the "Original Series D Issue Price"), plus (2) an amount equal to declared but unpaid dividends on such shares. If upon the occurrence of such event, the assets and funds thus distributed among the holders of the Series A, Series B, Series C and Series D Preferred Stock shall be insufficient to permit the payment to such holders of the full aforesaid preferential amounts, then the entire assets and funds of the corporation legally available for distribution shall be distributed ratably among the holders of the Series A, Series B, Series C and Series D Preferred Stock and, as between such series, in proportion to the product of the respective preference amount of each such share multiplied by the number of shares of such stock owned by each such holder.

c. Upon the completion of the distribution required by subparagraphs (a) and (b) of this Section 2, if assets remain in this corporation, the holders of the Common Stock of this corporation shall receive all of the remaining assets of this corporation.

d. A consolidation of this corporation with or merger into any other corporation or corporations, (other than a wholly owned subsidiary corporation or a merger to change the state of domicile of this corporation) or a sale, conveyance or disposition of all or substantially all of the assets of this corporation or the effectuation by the corporation of a transaction or series of related transactions in which more than 50% of the voting power of the corporation is disposed of, shall be treated as a liquidation within the meaning of this Section 2.

e. Any securities to be delivered to the holders of the Preferred Stock pursuant to subsection 2(a), (b) or (c) above shall be valued as follows:

(1) Securities not subject to investment letter or other similar restrictions on free marketability:

(a) If traded on a securities exchange, the value shall be deemed to be the average of the closing prices of the securities on such exchange over the 30-day period ending three (3) days prior to the closing;

(b) If actively traded over-the-counter, the value shall be deemed to be the average of the closing bid or sale prices (whichever are applicable) over the 30-day period ending three (3) days prior to the closing; and

(c) If there is no active public market, the value shall be the fair market value thereof, as mutually determined by the corporation and the holders of Preferred Stock which would be entitled to receive such securities or the same type of securities and which Preferred Stock represents at least a majority of the voting power of all then outstanding shares of such Preferred Stock.

(2) The method of valuation of securities subject to investment letter or other restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall be to make an appropriate discount from the market value determined as above in (i) (A), (B) or (C) to reflect the approximate fair market value thereof, as mutually determined by the corporation and the holders of Preferred Stock which would be entitled to receive such securities or the same type of securities and which represent at least a majority of the voting power of all then outstanding shares of such Preferred Stock.

f. The corporation shall give each holder of record of Preferred Stock written notice of any impending transaction described in this Section 2 not later than twenty (20) days prior to the stockholders' meeting called to approve such transaction, or twenty (20) days prior to the closing of such transaction, whichever is earlier, and shall also notify such holders in writing of the final approval of such transaction. The first of such notices shall describe the material terms and conditions of the impending transaction and the provisions of this Section 2, and the corporation shall thereafter give such holders prompt notice of any material changes. The transaction shall in no event take place sooner than twenty (20) days after the corporation has given the first notice provided for herein or sooner than ten (10) days after the corporation has given notice of any material changes provided for herein; provided, however, that such periods may be shortened upon the written consent of the holders of Preferred Stock which are entitled to such notice rights or similar notice rights and which represent at least a majority of the voting power of all then outstanding shares of such Preferred Stock.

3. Conversion. The holders of the Preferred Stock shall have conversion rights as follows (the "Conversion Rights"):

a. Right to Convert.

(1) Subject to subsection 3(c) below, each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share, at the office of this corporation or any transfer agent for the Preferred Stock, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Original Series A Issue Price, the Original Series B Issue Price, the Original Series C Issue Price, the Original Series D Issue Price, the Original Series E Issue Price, the Original Series F Issue Price, or the Original Series G Issue Price, as appropriate, by the Conversion Price at the time in effect for such series. The initial Conversion Price per share for each series of Preferred Stock shall be its Original Issue Price; provided, however, that the Conversion Price for each series of Preferred Stock shall be subject to adjustment as set forth in subsection 3(c).

(2) Each share of each series of Preferred Stock shall automatically be converted into shares of Common Stock at the Conversion Price at the time in effect for such series of Preferred Stock immediately upon the consummation of the corporation's sale of its Common Stock in a bona fide, firm commitment underwriting pursuant to a registration statement on Form S-1 under the Securities Act of 1933, as amended, the public offering price of which was not less than \$7.50 per share (adjusted to reflect subsequent stock dividends, stock splits or recapitalization) and the cash proceeds of which were at least \$15,000,000 in the aggregate. If the holders of a majority of the outstanding shares of Series E Preferred Stock elect to voluntarily convert their shares into Common Stock for any reason, even if the requirements of this Section 3(a)(2) are not met, then each share of Series F and Series G Preferred Stock shall automatically be converted into shares of Common Stock at the Conversion Price at the time in effect for the Series F and Series G Preferred Stock, respectively.

b. Mechanics of Conversion. Before any holder of Preferred Stock shall be entitled to convert the same into shares of Common Stock, he shall surrender the certificate or certificates therefor, duly endorsed, at the office of this corporation or of any transfer agent for the Preferred Stock, and shall give written notice by mail, postage prepaid, to this corporation at its principal corporate office, of the election to convert the same and shall state therein the name or names in which the certificate or certificates for shares of Common Stock are to be issued. This corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder of Preferred Stock, or to the nominee or nominees of such holder, a certificate or certificates for the number of shares of Common Stock to which such holder shall be entitled as aforesaid. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the shares of Preferred Stock to be converted, and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock as of such date. If the conversion is in connection with an underwritten offer of securities registered pursuant to the Securities

Act of 1933, the conversion may, at the option of any holder tendering Preferred Stock for conversion, be conditioned upon the closing with the underwriter of the sale of securities pursuant to such offering, in which event the person(s) entitled to receive the Common Stock issuable upon such conversion of the Preferred Stock shall not be deemed to have converted such Preferred Stock until immediately prior to the closing of such sale of securities.

c. Conversion Price Adjustments of Preferred Stock. The Conversion Price of each series of Preferred Stock shall be subject to adjustment from time to time as follows:

(1) (a) Upon each issuance by the corporation of any Additional Stock (as defined below), after the date upon which any shares of the Series A Preferred Stock were first issued, with respect to adjustments to the Series A Conversion Price, or after the date upon which any shares of the Series B Preferred Stock were first issued, with respect to adjustments to the Series B Conversion Price, or after the date upon which shares of Series C Preferred Stock were first issued, with respect to adjustments to the Series C Conversion Price, or after the date upon which shares of Series D Preferred Stock were first issued, with respect to adjustments to the Series D Conversion Price, or after the date upon which shares of Series E Preferred Stock were first issued, with respect to adjustments to the Series E Conversion Price, after the date upon which shares of Series F Preferred Stock were first issued, with respect to adjustments to the Series F Conversion Price, or after the date upon which shares of Series G Preferred Stock were first issued, with respect to adjustments to the Series G Conversion Price (the "Purchase Date" with respect to each series), without consideration or for a consideration per share less than the Conversion Price for Series A, Series B, Series C, Series D, Series E, Series F or Series G Preferred Stock, respectively, in effect immediately prior to the issuance of such Additional Stock, the Conversion Price for such series in effect immediately prior to each such issuance shall forthwith (except as otherwise provided in this subsection 3(c)(1)) be adjusted to a price determined by multiplying such Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issuance plus the number of shares of Common Stock which the aggregate consideration received by the corporation for such issuance would purchase at such Conversion Price; and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issuance plus the number of shares of such Additional Stock. The foregoing calculation shall take into account shares deemed issued pursuant to Section 3(c)(1)(e) on account of options, rights or convertible or exchangeable securities.

(b) No adjustment of the Conversion Price for the Series A, Series B, Series C, Series D, Series E, Series F or Series G Preferred Stock pursuant to this subsection 3(c)(1) shall be made in an amount less than one cent per share, provided that any adjustments which are not required to be made by reason of this sentence shall be carried forward and shall be either taken into account in any subsequent

adjustment made prior to 3 years from the date of the event giving rise to the adjustment being carried forward, or shall be made at the end of 3 years from the date of the event giving rise to the adjustment being carried forward. Except to the limited extent provided for in subsections 3(c)(1)(e)(iii) and 3(c)(1)(e)(iv) below, no adjustment of such Conversion Price pursuant to this subsection 3(c)(1) shall have the effect of increasing the Conversion Price above the Conversion Price in effect immediately prior to such adjustment.

(c) In the case of the issuance of Common Stock for cash, the consideration shall be deemed to be the amount of cash paid therefor before deducting any reasonable discounts, commissions or other expenses allowed, paid or incurred by this corporation for any underwriting or otherwise in connection with the issuance and sale thereof.

(d) In the case of the issuance of the Common Stock for a consideration in whole or in part other than cash, the consideration other than cash shall be deemed to be the fair value thereof as determined by the Board of Directors irrespective of any accounting treatment.

(e) In the case of the issuance (whether before, on or after the applicable Purchase Date) of options to purchase or rights to subscribe for Common Stock, securities by their terms convertible into or exchangeable for Common Stock or options to purchase or rights to subscribe for such convertible or exchangeable securities, the following provisions shall apply for all purposes of this subsection 3(c)(1) and subsection 3(c)(2):

i) The aggregate maximum number of shares of Common Stock deliverable upon exercise (assuming the satisfaction of any conditions to exercisability, including without limitation, the passage of time, but without taking into account potential antidilution adjustments) of such options to purchase or rights to subscribe for Common Stock shall be deemed to have been issued at the time such options or rights were issued and for a consideration equal to the consideration (determined in the manner provided in subsections 3(c)(1)(c) and 3(c)(1)(d)), if any, received by the corporation upon the issuance of such options or rights plus the minimum exercise price provided in such options or rights (without taking into account potential antidilution adjustments) for the Common Stock covered thereby.

ii) The aggregate maximum number of shares of Common Stock deliverable upon conversion of or in exchange (assuming the satisfaction of any conditions to convertibility or exchangeability, including, without limitation, the passage of time, but without taking into account potential antidilution adjustments) for any such convertible or exchangeable securities or upon the exercise of options to purchase or rights to subscribe for such convertible

or exchangeable securities and subsequent conversion or exchange thereof shall be deemed to have been issued at the time such securities were issued or such options or rights were issued and for a consideration equal to the consideration, if any, received by the corporation for any such securities and related options or rights (excluding any cash received on account of accrued interest or accrued dividends), plus the minimum additional consideration, if any, to be received by the corporation (without taking into account potential antidilution adjustments) upon the conversion or exchange of such securities or the exercise of any related options or rights (the consideration in each case to be determined in the manner provided in subsections 3(c)(1)(c) and 3(c)(1)(d)).

iii) In the event of any change in the number of shares of Common Stock deliverable or in the consideration payable to this corporation upon exercise of such options or rights or upon conversion of or in exchange for such convertible or exchangeable securities, including, but not limited to, a change resulting from the antidilution provisions thereof, the Conversion Prices of each series of Preferred Stock, to the extent in any way affected by or computed using such options, rights or securities, shall be recomputed to reflect such change, but no further adjustment shall be made for the actual issuance of Common Stock or any payment of such consideration upon the exercise of any such options or rights or the conversion or exchange of such securities.

iv) Upon the expiration of any such options or rights, the termination of any such rights to convert or exchange or the expiration of any options or rights related to such convertible or exchangeable securities, the Conversion Prices of each series of Preferred Stock, to the extent in any way affected by or computed using such options, rights or securities or options or rights related to such securities, shall be recomputed to reflect the issuance of only the number of shares of Common Stock (and convertible or exchangeable securities which remain in effect) actually issued upon the exercise of such options or rights, upon the conversion or exchange of such securities or upon the exercise of the options or rights related to such securities.

v) The number of shares of Common Stock deemed issued and the consideration deemed paid therefor pursuant to subsections 3(c)(1)(e)(i) and (ii) shall be appropriately adjusted to reflect any change, termination or expiration of the type described in either subsection 3(c)(1)(e)(iii) or (iv).

(2) "Additional Stock" shall mean any shares of Common Stock issued (or deemed to have been issued pursuant to subsection 3(c)(1)(e)) by this corporation after the Purchase Date other than

(a) Common Stock issued pursuant to a transaction described in subsection 3(c)(3) hereof,

(b) shares of Common Stock issuable or issued to employees, officers, consultants or directors of this corporation directly or pursuant to a stock option plan or restricted stock plan approved by the Board of Directors of this corporation, or employees of companies participating in development efforts as approved by the Board of Directors.

(c) equity securities issuable or issued (and any warrants or options therefor) in connection with any research and development financing or business transaction approved by the Board of Directors.

(3) In the event the corporation should at any time or from time to time after the Purchase Date fix a record date for the effectuation of a split or subdivision of the outstanding shares of Common Stock or the determination of holders of Common Stock entitled to receive a dividend or other distribution payable in additional shares of Common Stock or other securities or rights convertible into, or entitling the holder thereof to receive directly or indirectly, additional shares of Common Stock (hereinafter referred to as "Common Stock Equivalents") without payment of any consideration by such holder for the additional shares of Common Stock or the Common Stock Equivalents (including the additional shares of Common Stock issuable upon conversion or exercise thereof), then, as of such record date (or the date of such dividend distribution, split or subdivision if no record date is fixed), the Conversion Prices of each series of Preferred Stock shall be appropriately decreased so that the number of shares of Common Stock issuable on conversion of each share of each series shall be increased in proportion to such increase of the aggregate of shares of Common Stock outstanding and those issuable with respect to such Common Stock Equivalents with the number of shares issuable with respect to Common Stock Equivalents determined from time to time in the manner provided for deemed issuances in subsection 3(c)(1)(e).

(4) If the number of shares of Common Stock outstanding at any time after the Purchase Date is decreased by a combination of the outstanding shares of Common Stock, then, following the record date of such combination, the Conversion Prices for each series of Preferred Stock shall be appropriately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in outstanding shares.

d. Other Distributions. In the event this corporation shall declare a distribution payable in securities of other persons, evidences of indebtedness issued by this corporation or other persons, assets (excluding cash dividends) or options or rights not referred to in subsection 3(c)(3), then, in each such case for the purpose of this subsection 3(d), the holders of each series of Preferred Stock shall be entitled to a proportionate share of any such distribution as though they were the holders of the number of shares of

Common Stock of the corporation into which their shares of Preferred Stock are convertible as of the record date fixed for the determination of the holders of Common Stock of the corporation entitled to receive such distribution.

e. Recapitalizations. If at any time or from time to time there shall be a recapitalization of the Common Stock (other than a subdivision, combination or merger or sale of assets transaction provided for elsewhere in Section 2 or this Section 3) provision shall be made so that the holders of each series of Preferred Stock shall thereafter be entitled to receive upon conversion thereof the number of shares of stock or other securities or property of the Company or otherwise, to which a holder of Common Stock deliverable upon conversion would have been entitled on such recapitalization. In any such case, appropriate adjustment shall be made in the application of the provisions of this Section 3 with respect to the rights of the holders of each series of Preferred Stock after the recapitalization, to the end that the provisions of this Section 3 (including adjustment of the Conversion Price then in effect and the number of shares purchasable upon conversion of each series of the Preferred Stock) shall be applicable after that event as nearly equivalent as may be practicable.

f. No Impairment. This corporation will not, by amendment of its Certificate of Incorporation or through any reorganization, recapitalization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by this corporation, but will at all times in good faith assist in the carrying out of all the provisions of this Section 3 and in the taking of all such action as may be necessary or appropriate in order to protect the Conversion Rights of the holders of the Preferred Stock against impairment.

g. No Fractional Shares and Certificate as to Adjustments.

(1) No fractional shares shall be issued upon conversion of the Preferred Stock, and the number of shares of Common Stock to be issued shall be rounded to the nearest whole share. Whether or not fractional shares are issuable upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time converting into Common Stock and the number of shares of Common Stock issuable upon such aggregate conversion.

(2) Upon the occurrence of each adjustment or readjustment of the Conversion Price of any series of Preferred Stock pursuant to this Section 3, this corporation, at its expense, shall promptly compute such adjustment or readjustment in accordance with the terms hereof and prepare and furnish to each holder of such series of Preferred Stock a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. This corporation shall, upon the written request at any time of any holder of Preferred Stock, furnish or cause to be furnished to such holder a like certificate setting



forth (a) such adjustment and readjustment, (b) the Conversion Price at the time in effect, and (c) the number of shares of Common Stock and the amount, if any, of other property which at the time would be received upon the conversion of a share of Preferred Stock.

h. Notices of Record Date. In the event of any taking by this corporation of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend (other than a cash dividend) or other distribution, any right to subscribe for, purchase or otherwise acquire any shares of stock of any class or any other securities or property, or to receive any other right, this corporation shall mail to each holder of Preferred Stock, at least 20 days prior to the date specified therein, a notice specifying the date on which any such record is to be taken for the purpose of such dividend, distribution or right, and the amount and character of such dividend, distribution or right.

i. Reservation of Stock Issuable Upon Conversion. This corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock solely for the purpose of effecting the conversion of the shares of the Preferred Stock such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of the Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, in addition to such other remedies as shall be available to the holder of such Preferred Stock, this corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes.

j. Notices. Any notice required by the provisions of this Section 3 to be given to the holders of shares of Preferred Stock shall be deemed given if deposited in the United States mail, postage prepaid, and addressed to each holder of record at his address appearing on the books of this corporation.

#### 4. Voting Rights.

a. General Voting Rights. Except as otherwise required by applicable law or by Section 5 hereof, and, solely with respect to the Series F Preferred Stock, except in connection with the election of directors of the corporation as set forth in Section 4(b) herein, the holder of each share of Preferred Stock shall have the right to one vote for each share of Common Stock into which such Preferred Stock could then be converted (with any fractional share determined on an aggregate conversion basis being rounded to the nearest whole share), and with respect to such vote, such holder shall have full voting rights and powers equal to the voting rights and powers of the holders of Common Stock, and shall be entitled, notwithstanding any provision hereof, to notice of any stockholders' meeting in accordance with the Bylaws of this corporation, and shall be

entitled to vote, together with holders of Common Stock, with respect to any question upon which holders of Common Stock have the right to vote.

b. Voting for Election of Directors. The holders of the Series F Preferred Stock shall be entitled, voting together as a separate series, to elect one (1) member of the Board of Directors. Any vacancy of the director elected by the Series F Preferred Stock shall be filled by only the vote of a majority of the outstanding shares of the Series F Preferred Stock entitled to vote thereon. The holders of the Series F Preferred Stock shall not be entitled to vote for any directors of the corporation other than to the extent set forth in this paragraph 4(b).

5. Protective Provisions.

a. So long as 1,000,000 shares of Preferred Stock are outstanding, this corporation shall not without first obtaining the approval (by vote or written consent, as provided by law) of the holders of at least a majority of the then outstanding shares of Preferred Stock:

(1) sell, convey, or otherwise dispose of or encumber all or substantially all of its property or business or merge into or consolidate with any other corporation (other than a wholly owned subsidiary corporation) or effect any transaction or series of related transactions in which more than 50% of the voting power of the corporation is disposed of;

(2) alter or change the rights, preferences or privileges of the shares of Preferred Stock so as to affect adversely the shares; provided, however, that if the alteration or change only effects a particular series of Preferred Stock that series of Preferred Stock shall have a series vote; or

(3) increase or decrease the authorized number of shares of Preferred Stock provided, however, that any increase or decrease of the authorized number of a particular series of Preferred Stock shall be subject to the approval of the holders of at least a majority of such series.

b. So long as a total of 1,000,000 shares of Series A, Series B, Series C, Series D and Series G Preferred Stock are outstanding, this corporation shall not without first obtaining the approval (by vote or written consent, as provided by law) of the holders of at least a majority of the then outstanding shares of Series A, Series B, Series C, Series D and Series G Preferred Stock, voting together as a single class, create any new class or series of stock or any other securities convertible into equity securities of the corporation having a preference over, or being on a parity with, the Series A, Series B, Series C, Series D and Series G Preferred Stock with respect to liquidation or dividends.

c. So long as 1,000,000 shares of Series E Preferred Stock are outstanding, this corporation shall not without first obtaining the approval (by vote or written consent, as provided by law) of the holders of at least a majority of the then outstanding shares of Series E Preferred Stock create any new class or series of stock or any other securities convertible into equity securities of the corporation having a preference over, or being on a parity with, the Series E Stock with respect to liquidation or dividends.

d. So long as 1,000,000 shares of Series F Preferred Stock are outstanding, this corporation shall not without first obtaining the approval (by vote or written consent, as provided by law) of the holders of at least a majority of the then outstanding shares of Series F Preferred Stock create any new class or series of stock or any other securities convertible into equity securities of the corporation having a preference over, or being on a parity with, the Series F Stock with respect to liquidation or dividends.

6. Status of Converted Stock. In the event any shares of Preferred Stock shall be converted pursuant to Section 3 hereof, the shares so converted shall be cancelled and shall not be issuable by the corporation. From time to time, the Certificate of Incorporation of this corporation shall be appropriately revised to reflect the corresponding reduction in the corporation's authorized capital stock.

#### C. Common Stock.

1. Dividend Rights. Subject to the prior rights of holders of all classes of stock at the time outstanding having prior rights as to dividends, the holders of the Common Stock shall be entitled to receive, when and as declared by the Board of Directors, out of any assets of the corporation legally available therefor, such dividends as may be declared from time to time by the Board of Directors.

2. Liquidation Rights. Upon the liquidation, dissolution or winding up of the corporation, the assets of the corporation shall be distributed as provided in Section 2 of Division (B) of this Article IV hereof.

3. Redemption. The Common Stock is not redeemable.

4. Voting Rights. The holder of each share of Common Stock shall have the right to one vote, and shall be entitled to notice of any stockholders' meeting in accordance with the Bylaws of this corporation, and shall be entitled to vote upon such matters and in such manner as may be provided by law.

## ARTICLE V.

Except as otherwise provided in this Certificate of Incorporation, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the corporation.

## ARTICLE VI.

The number of directors of the corporation shall be fixed from time to time by a bylaw or amendment thereof duly adopted by the Board of Directors or by the stockholders.

## ARTICLE VII.

Elections of directors need not be by written ballot unless the Bylaws of the corporation shall so provide.

## ARTICLE VIII.

Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the corporation may be kept (subject to any provision contained in the statutes) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the corporation.

## ARTICLE IX.

a) California. The liability of each and every director of this corporation for monetary damages shall be eliminated to the fullest extent permissible under California law. If California Corporation Law is hereafter amended to authorize, with the approval of a corporation's stockholders, further reductions in the liability of the corporation's directors for breach of fiduciary duty, then a director of the corporation shall not be liable for any such breach to the fullest extent permitted by California Corporation Law as so amended.

b) Delaware. To the fullest extent permitted by the General Corporation Law of Delaware, as the same may be amended from time to time, a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law of Delaware is hereafter amended to authorize, with the approval of a corporation's stockholders, further reductions in the liability of the corporation's directors for breach of fiduciary duty, then a director of the corporation shall not be liable for any such breach to the fullest extent permitted by the General Corporation Law of Delaware as so amended.

c) Consistency. In the event of any inconsistency between Sections A and B of this Article, the controlling Section, as to any particular issue with regard to any particular matter, shall be the one which provides to the director in question the greatest protection from liability.

d) Effect of Repeal or Modification. Any repeal or modification of the foregoing provisions of this Article shall not adversely affect any right or protection of a director of the Corporation with respect to any acts or omissions of such director occurring prior to such repeal or modification.

## ARTICLE X.

a) California. To the fullest extent permitted by California law, this corporation is authorized to provide indemnification of (and advancement of expenses to) agents (as defined in Section 317 of the California Corporations Code) through bylaw provisions, agreements with agents, vote of shareholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 317 of the California Corporations Code, subject only to applicable limits set forth in Section 204 of the California Corporations Code, with respect to actions for breach of duty to the corporation and its shareholders.

b) Delaware. To the fullest extent permitted by applicable law, this corporation is also authorized to provide indemnification of (and advancement of expenses to) such agents (and any other persons to which Delaware law permits this corporation to provide indemnification) through bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the Delaware General Corporation Law, subject only to limits created by applicable Delaware law (statutory or non-statutory), with respect to actions for breach of duty to the corporation, its stockholders, and others.

c) Consistency. In the event of any inconsistency between Sections A and B of this Article, the controlling Section, as to any particular issue with regard to any particular matter, shall be the one which authorizes for the benefit of the agent or other person in question the provision of the fullest, most prompt, most certain or otherwise most favorable indemnification and/or advancement.

d) Effect of Repeal or Modification. Any repeal or modification of any of the foregoing provisions of this Article X shall not adversely affect any right or protection of a director, officer, agent or other person existing at the time of, or increase the liability of any director of the corporation with respect to any acts or omissions of such director, officer or agent occurring prior to such repeal or modification.

ARTICLE XI.

The corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

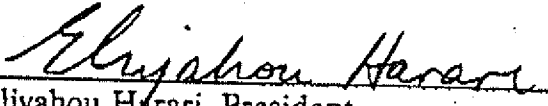
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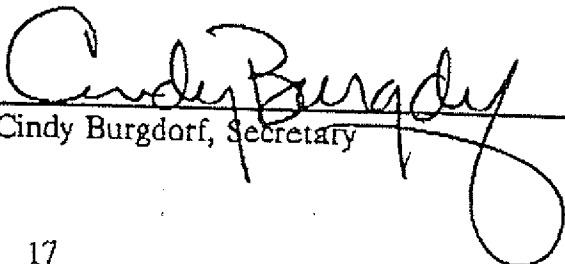
THREE: The foregoing amendment has been approved by the Board of Directors of said corporation.

FOUR: The foregoing amendment was approved by the holders of the requisite number of shares of said corporation in accordance with Sections 242 and 245 of the Delaware General Corporation Law; the total number of outstanding shares of each class entitled to vote with respect to the foregoing amendment was 765,000 shares of Series A Preferred Stock, 4,402,902 shares of Series B Preferred Stock, 339,906 shares of Series C Preferred Stock, 2,426,602 shares of Series D Preferred Stock, 6,896,362 shares of Series E Preferred Stock, 7,165,162 shares of Series F Preferred Stock, 996,927 shares of Series G Preferred Stock and 4,409,422 shares of Common Stock. The number of shares voting in favor of the foregoing amendment equaled or exceeded the vote required, such required vote being a majority of the outstanding shares of Preferred Stock, voting together as a single class, a majority of the outstanding shares of Common Stock, on an as-converted basis, and a majority of the outstanding shares of each series of Preferred Stock.

FIVE: The foregoing amendment was adopted in conformity with Section 228 of the Delaware General Corporation Law; written notice was given to the nonconsenting stockholders of the taking of the corporate action without a meeting by less than unanimous written consent.


IN WITNESS WHEREOF, the undersigned have executed this certificate on August 25, 1995.

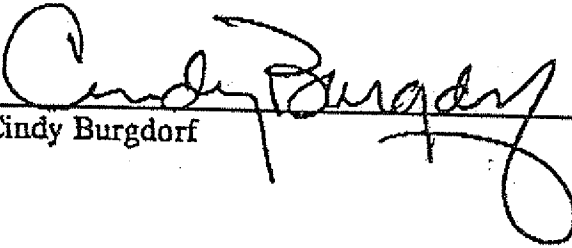
  
Eliyahou Harari, President

  
Cindy Burgdorf, Secretary

The undersigned certify under penalty of perjury that they have read the foregoing Restated Certificate of Incorporation and know the contents thereof, and that the statements therein are true.

Executed at Santa Clara, California, on August 25, 1995.

  
\_\_\_\_\_  
Eliyahou Harari

  
\_\_\_\_\_  
Cindy Burgdorf